To: William Simon[wsimon@frontier.net]; 'Peter Butler'[butlerpeter2@gmail.com]; 'Larry Perino'[larry.perino@kinross.com]; 'Lisa Richardson'[lrichard@blm.gov]; 'Buck Skillen'[fpope@bresnan.net]; **Personal Email/Ex. 6** Wall, Dan[wall.dan@epa.gov]; 'Barb Horn'[barb.horn@state.co.us]; 'Brent Lewis'[b1lewis@blm.gov]
From: Fearn Engineering
Sent: Mon 2/23/2015 7:34:12 PM
Subject: RE: Comparing Howardsville and A68

Bill - CGI's samples from the Animas River (which you don't have) for AR-2 (upstream of ground water flow from the POW site) and AR-3 (downstream from the ground water discharge from the POW & Little Nation mill sites but above Cunningham - where the pipe line crosses the Animas) show the following: AR-2 followed by AR-3: 6/30/14 - Zn 343 & 353; Cd 1.2 & 1.2; Mn 490 & 552. 10/29/14 - Zn 267 & 282; Cd 0.8 & 0.9; Mn 154 &195. Past sampling has shown that AR-1 (upstream of the POW mill site) is essentially the same as AR-2). Good questions - I was wondering the same thing for the October samples. The only other surface sources between AR-3 and the Howardsville gage that I remember are Cunningham Creek, Hematite Gulch and the discharge from the portal below the Little Nation Mine.

The CGI samples were taken with a dipper about 6 ft out in the stream after mixing. The progression of values is logical from AR-2 to AR-3 and provides some duplication.

Steve

-----Original Message-----
From: William Simon
Sent: Feb 23, 2015 11:19 AM
To: 'Peter Butler' , 'Steve Fearn' , 'Larry Perino' , 'Lisa Richardson' , 'Buck Skillen' , 'Ray Miller' , 'Dan Wall' , 'Barb Horn' , 'Brent Lewis'
Subject: RE: Comparing Howardsville and A68

Although the problem period really is in March & April there is a lot of loading going on in later months of the year that is coming from upstream of the Howardsville gauge, mostly as high flow runoff events but the highest was 10/2/14; Interesting. That must have been a rain event?

Bill

From: Peter Butler [mailto:butlerpeter2@gmail.com]
Sent: Sunday, February 22, 2015 7:26 PM
To: Bill Simon; Steve Fearn; Larry Perino; Lisa Richardson; Buck Skillen; Ray Miller; Dan Wall; Barb Horn; Brent Lewis
Subject: Comparing Howardsville and A68

Hi Folks – Attached is a spreadsheet comparing concentrations and loads at the Howardville Gage to A68 for zinc, cadmium, and manganese for 2014. I haven't yet received data for Nov. and Dec. Shows some interesting changes throughout the year.

I used estimated flows by USGS at A68 when it was affected by ice. The Colo. Div. of Water

Resources doesn't indicate if the Howardsville gage is ice affected. A word of warning, I first checked A68 through the Colorado Div. of Water Resources which is linked to the USGS website. However, that data appeared to by old, provisional data. I went directly to the USGS website and got somewhat different, and I think more up to date data. So check USGS directly for their gage data.

Peter Butler

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